EXHIBIT F

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Type: **C4001 POLYPROPYLENE**

Product Name: 31S1A-CS448, 31S35V-X0316, 51S12A, 51S12A-CS439, 52T30V, CP-, D-, F-,FF-, FP-, FPT-, FT-, HR-, L-, NW, X-, ZL-, ZP-, ZS-, 51B12A, 52K7V

This MSDS covers multiple grades of polypropylene. The grades names begin with the codes listed above, followed by a series of numbers. For industrial exposure and emergency response purposes, all listed grades have similar physical, chemical and hazard properties.

Manufacturer Information:

Sunoco, Inc. (R&M)
1735 Market Street LL

Philadelphia, Pennsylvania, 19103-7583

Product Use:

Polymer

Emergency Phone Numbers:

Chemtrec	(800) 424-9300
Sunoco Inc.	(800) 964-8861

Information:

Product Safety Information	(610) 859-1120

2. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS No.	Amount (Vol%)
1-PROPENE, HOMOPOLYMER, ISOTACT	25085-53-4	100 - 100

EXPOSURE GUIDELINES (SEE SECTION 15 FOR ADDITIONAL EXPOSURE LIMITS)

	CAS No.	Governing Body	Exposure Limits

3. HAZARDS IDENTIFICATION

- **EMERGENCY OVERVIEW**
  Caution! Low hazard for usual industrial or commercial handling. Inhalation of vapors from thermal processing may cause irritation to the upper respiratory tract.

Hazards Ratings:
Key: 0 = least, 1 = slight, 2 = moderate, 3 = high, 4 = extreme

Health	Fire	Reactivity	PPI

NFPA	1	1	0	
HMIS	0	1	0	X

- **POTENTIAL HEALTH EFFECTS**

  - **PRE-EXISTING MEDICAL CONDITIONS**
    The following diseases or disorders may be aggravated by exposure to this product: respiratory system, skin,
  - **INHALATION**
    Inhalation of fumes, vapors and smoke from thermal processing may cause irritation to the upper respiratory tract. Symptoms may include burning sensation, coughing and sore throat.

    LC50 (mg/l): no data
    LC50 (mg/m3): no data
    LC50 (ppm): no data

  - **SKIN**
    Contact with heated product may cause thermal burns.

    Draize Skin Score: no data other
    LD50 (mg/kg): no data

  - **EYES**
    Contact with heated product may cause thermal burns. Slight irritation from contact with pellets. Possible irritation from fumes, vapors or smoke from thermal processing.
  - **INGESTION**
    No effects expected if product is ingested.
    LD50 (g/kg): no data

4. FIRST AID MEASURES

- **INHALATION**
  Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and continue to monitor. Get medical attention.
- **SKIN**
  For hot product, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention. No attempt should be made to remove material from skin or to remove contaminated clothing as the damaged flesh can be easily torn.
- **EYES**
  For contact with molten product, flush immediately with plenty of cool water for at least 15 minutes. Get medical attention.
- **INGESTION**
  First aid not normally required.

5. FIRE FIGHTING MEASURES

- **EXTINGUISHING MEDIA**
  The following media may be used to extinguish a fire involving this material: Water spray; Carbon dioxide; Dry chemical;
- **FIRE FIGHTING INSTRUCTIONS**
  The use of fresh air equipment such as Self Contained Breathing Apparatus (SCBA) or Supplied Air Respirators should be worn for fire fighting if exposure or potential exposure to products of combustion is expected. Wear structural fire fighting gear.

FLAMMABLE PROPERTIES

	Typical	Minimum	Maximum	Text Result	Units	Method
Flash Point				no data	F	N/A

Autoignition Temperature				no data	F	N/A
Lower Explosion Limit				no data	%	N/A
Upper Explosion Limit				no data	%	N/A

6. ACCIDENTAL RELEASE MEASURES

Vacuum or sweep up material and place in a disposal container. Loose pellets may present a slipping hazard. Clean up spills immediately, observing precautions in Protective Equipment section.

7. HANDLING AND STORAGE

- **HANDLING**
  Avoid breathing vapors from heated material. Follow all MSDS/label precautions even after container is emptied because it may retain product residue.
- **STORAGE**
  Store in a cool dry place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Consult With a Health and Safety Professional for Specific Selections

- **ENGINEERING CONTROLS**
  Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. General dilution ventilation may assist with the reduction of air contaminant concentrations.
- **PERSONAL PROTECTION**
  - **EYE PROTECTION**
    Splash proof chemical goggles are recommended to protect against the splash of product. Full-face shield is recommended to protect against splash of hot product.
  - **GLOVES or HAND PROTECTION**
    Wear insulated impervious protective gear to protect against the splash of hot product.
  - **RESPIRATORY PROTECTION**
    Half-mask air purifying respirator with combination organic vapor and HEPA filter cartridges is acceptable for exposures to ten (10) times the exposure limit. Full-face air purifying respirator with combination organic vapor and HEPA filter cartridges is acceptable for exposures to fifty (50) times the exposure limit.
  - **OTHER**
    Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Property	Typical	Units	Text Result	Reference
Appearance		other	White pellets	
Boiling Point		F	no data	
Bulk Density		lb/gal	no data	
Melting Point		F	160 - 170 deg C	
Molecular Weight		other	no data	
Octanol/Water Coefficient		other	no data	
pH		other	no data	
Specific Gravity		other	0.90 - 0.91	
Solubility In Water		wt %	Negligible	
Odor		other	Odorless	

Odor Threshold		other	no data	
Vapor Pressure		psia	Negligible	
Viscosity (F)		other	no data	
Viscosity (C)		other	no data	
% Volatile		wt %	no data	

10. STABILITY AND REACTIVITY

- **STABILITY**
  Stable
- **CONDITIONS TO AVOID**
  none known
- **INCOMPATIBILITY**
  The following materials are incompatible with this product: Strong oxidizers such as chlorine, peroxides, chromates, nitric acid, perchlorates, concentrated oxygen, sodium hypochlorite, calcium hypochlorite and permanganates. Chlorine; Nitric acid;
- **HAZARDOUS DECOMPOSITION PRODUCTS**
  Combustion may produce carbon monoxide, carbon dioxide and other asphyxiants.
- **HAZARDOUS POLYMERIZATION**
  Will not occur

11. ECOLOGICAL INFORMATION

No data available

12. DISPOSAL CONSIDERATIONS

Follow federal, state and local regulations. Contract to authorized disposal service.

13. TRANSPORT INFORMATION

Governing Body	Mode	Proper Shipping Name
DOT	Ground	Not Regulated

Governing Body	Mode	Hazard Class	UN/NA No.	Label
DOT	Ground	N/A	N/A	

14. REGULATORY INFORMATION

Regulatory List	Component	CAS No.
Inventory - Australia (AICS)	1-PROPENE, HOMOPOLYMER, ISOTACT	25085-53-4
Inventory - Canada - Domestic Substances List	1-PROPENE, HOMOPOLYMER, ISOTACT	25085-53-4
Inventory - China	1-PROPENE, HOMOPOLYMER, ISOTACT	25085-53-4
Inventory - Japan - (ENCS)	1-PROPENE, HOMOPOLYMER, ISOTACT	25085-53-4
Inventory - Korea - Existing and Evaluated	1-PROPENE, HOMOPOLYMER, ISOTACT	25085-53-4
Inventory - Philippines Inventory (PICCS)	1-PROPENE, HOMOPOLYMER, ISOTACT	25085-53-4
Inventory - TSCA - Sect. 8(b) Inventory	1-PROPENE, HOMOPOLYMER, ISOTACT	25085-53-4

Title III Classifications Sections 311,312:

- Acute: **NO**
- Chronic: **NO**
- Fire: **NO**
- Reactivity: **NO**
- Sudden Release of Pressure: **NO**

15. OTHER INFORMATION

Follow all MSDS/label precautions even after container is emptied because it may retain product residue. COMPONENT TOXICITY: Polypropylene has been tested in laboratory rats by subcutaneous implantation of discs or powder. Local sarcomas were induced at the site of implantation. No epidemiological studies or case reports suggest any serious chronic health hazards from long-term exposure to polypropylene decomposition products below the irritation level (IARC, 19, 128).